

REMARKS

Reconsideration and allowance are respectfully requested in view of the foregoing amendments and the following remarks.

Claims 12-26 are pending in this application.

Claim 25 has been amended

Regarding the Examiner Interview

Applicant respectfully thanks the Examiner for taking the time and for the productive interview on August 30, 2004 at 10 am EST. The interview resulted in an agreement between the Examiner and the Applicant that the cited art does not anticipate or render obvious the claims as presented in this amendment. Claim 25 has been amended as discussed in the interview.

Regarding the § 102 Rejection

Claims 12, 13, 16-19, 21, 23 and 25 were rejected under 35 U.S.C. § 102(b) as being anticipated by Ho ("High Index Contrast Mirrors for Optical Microcavities"). Applicant respectfully traverses this rejection.

Referring to Ho, and in particular, Figures 1(a) and 1(b), Applicant respectfully points out that Ho does not teach or anticipate a "support layer formed over a portion of the sidewalls". Ho teaches support pillars within the layered structure rather than support layers formed over a portion of the sidewalls. Ho states "unetched regions of the structure shown by the dash lines in Figure 1(a) serve as pillars" to support the thin etched mirror layers that are formed as "bridges" of width W and length L . (Ho, Col. 3) There is no mention in the Ho reference of creating any type of support layer over any portion of the sides of each layer.

Claim 12 specifically recites “a support layer formed over a portion of the sidewalls to support the second layers against movement.” Applicant respectfully submits that Ho does not teach or anticipate such sidewalls and requests that the § 102 rejection be withdrawn.

Claim 13, being dependent upon claim 12, is not anticipated for the same reasons as stated above with respect to claim 12. Furthermore, claim 13 recites that “the second layers and the support layer comprise substantially the same material”. Since Ho does not teach a support layer formed over a portion of the sidewalls, Applicant respectfully submits that Ho cannot teach or anticipate a support layer (as claimed) that comprises substantially the same material as the material in the second layer. As such, Applicant further submits that claim 13 is not anticipated by Ho and respectfully requests that the § 102 rejection be withdrawn.

Claim 16 recites a plurality of structure layers, “the structure layers each having edges.” Claim 16 further recites “a support layer about a portion of the edges.” As discussed above, Ho does not teach or anticipate support layers about any of the edges of the structure discussed in Figure 1(a) of Ho. As such, Applicant respectfully requests that the § 102 rejection be withdrawn and submits that claim 16 is ready for allowance.

Claims 17 and 19 are dependent upon claim 16 and are therefore not anticipated for at least the same reasons as discussed above with respect to claim 16. Applicant respectfully requests that the § 102 rejection be withdrawn and submits that claims 17 and 19 are ready for allowance.

Claim 18 is dependent upon claim 16 and is not anticipated for at least the reasons discussed above with respect to claim 16. Furthermore, claim 18 recites that the support layer, which is about a portion of the edges “comprises a material selected from the group consisting of InP, GaAs, and Si.” Applicant submits that since Ho does not teach or anticipate the claimed support layers, Ho can also not teach or anticipate the material that the support layers are made of. As such, Applicant respectfully requests that the § 102 rejection be withdrawn and submits that claim 18 is ready for allowance.

Claim 21 is dependent upon claim 12 and is not anticipated for at least the same reasons as stated above with respect to claim 12. Furthermore, claim 21 recites that “the support layer holds the second layer substantially parallel to each other.” Applicant respectfully points out that the only support layers discussed in Ho are the pillars located in the interior of the layered structure of Ho. As such, Ho does not teach or anticipate the support layer formed over a portion of the sidewalls and therefore cannot teach or anticipate a support layer formed over a portion of the sidewalls that “holds the second layers substantially parallel to each other.” As such, Applicant respectfully submits that Ho does not anticipate claim 21 and respectfully requests that the § 102 rejection be withdrawn.

Claim 23 is dependent upon claim 16 and is not anticipated for at least the same reasons as discussed above with respect to claim 16. Furthermore, claim 23 recites that the support layer “further holds said plurality of structure layers substantially parallel to each other.” Applicant respectfully points out that Ho does not teach a support layer that is “about a portion of the edges for supporting the structure layers.” And as such, Ho cannot teach that such a support layer

holds the plurality of structural layers substantially parallel to each other. Applicant respectfully requests that this § 102 rejection be withdrawn and submits that claim 23 is ready for allowance.

Independent claim 25 recites “a plurality of structure layers.” The structure layers each have “edges”. Claim 25 was amended to further recite a “support layer on a portion of the edges for supporting the structure layers.” The word “about” was changed to - on- - per an Examiner interview with Examiner Pritchett on August 30, 2004 at 10 am EST. Applicant and Examiner agreed that the word “on”, though extremely similar in meaning to “about”, differentiated claim 25 from the cited art. As such applicant respectfully submits that Ho does not teach a “support layer on a portion of the edges for supporting the structure layers.” Ho does not teach or anticipate support layers on any portion of the edges for supporting any layers. As such, Applicant respectfully submits that claim 25, as amended, is not anticipated by Ho and requests that the § 102 rejection be withdrawn.

Regarding the § 103 Rejection

Claims 14 and 15 were rejected under 35 U.S.C. § 103(a) as being rendered obvious by Ho in view of Baillargeon (U.S. Patent No. 6,326,646). Applicant respectfully traverses the rejection.

Claims 14 and 15 each depend upon independent claim 12, which recites, among other things, “a support layer formed over a portion of the sidewalls to support the second layers against movement.” Applicant respectfully points out that Ho does not teach, allude to or render obvious a support layer formed over a portion of the sidewalls. Ho discloses no support layer about the sidewalls. Instead, Ho specifically teaches and requires a multitude of layers forming

a pillar within the layered structure to support the multiple layers. See Ho, Fig. 1(a) within the dashed region. Furthermore, Baillargeon does not remedy the deficiencies of Ho.

Baillargeon, as discussed in Applicant's previous amendment, does not teach or render obvious gaps between the layers that require a need for a support layer to support against movement and to keep the layers stationary with respect to each other. In other words, there is no mention or discussion in Baillargeon about a support layer because there are no gaps or air gaps that require support in Baillargeon (Baillargeon at Fig. 1 and Col. 4, line 61-Col. 5, line 22). As such, Applicant respectfully submits that claims 14 and 15 are not rendered obvious by Ho in view of Baillargeon and respectfully requests that the § 103 rejection be withdrawn. Applicant submits that claims 14 and 15 are ready for allowance.

Regarding the Allowable Subject Matter

Applicant appreciates the Examiner's indication that claim 26 is allowed.

Applicant further appreciates the Examiner's indication that claims 20, 22 and 24 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Applicant respectfully submits that the discussion above overcoming the § 102 and § 103 rejections alleviates the need for rewriting the objected claims in independent form. Applicant respectfully submits that claims 20, 22 and 24 are ready for allowance.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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